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# PREPARATION OF AN INFORMATION BROCHURE AND EXHIBIT OF NASA TECHNOLOGY APPLICATIONS

(NASA-CR-144393) PREPARATION OF AN  
INFORMATION BROCHURE AND EXHIBIT OF NASA  
TECHNOLOGY APPLICATIONS Final Report  
(Southwest Research Inst.) 9 p HC \$3.25

N75-30932

CSCL 05B G3/82

Unclas  
33989

## FINAL REPORT

NASA Contract No. : NAS 9-14225

Southwest Research Institute Project 13-4000

to

National Aeronautics and Space Administration  
Lyndon B. Johnson Space Center  
Houston, Texas 77058

August 1975



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Approved:

*Haskell Ziperman*

H. Haskell Ziperman, M. D.  
Director

Department of Bioengineering

# **Final Report**

**NASA Contract No. NAS 9-14225  
Southwest Research Institute Project 13-4000**

## **TASK 1**

**Preparation of NASA Exhibits**

**Prepared by:**

**Robert L. Wilbur  
Senior Biomedical Research Engineer  
Department of Bioengineering  
Southwest Research Institute**

A new NASA Biomedical Applications Display case was designed and fabricated as per the Technical Monitor's requirements. These included:

- (1) Enclosed lighted display consisting of three units.
- (2) Two side units capable of housing a suitable programmable audio visual unit.
- (3) Convenient breakdown and shipping characteristics — display can be disassembled and placed in a single shipping crate for transport and storage.
- (4) Good appearance — display was fabricated with walnut veneer and Plexiglas for appearance and durability.

Figure 1 illustrates NASA Display II set up in the extended position.

Updating NASA Display I included replacement of the Audioscan audio visual machines with Caramate projectors and refurbishing existing hardware. The resulting display is shown in Figure 2.

Slides and narration for the Caramates were provided in both English and Spanish for each Caramate. The Technical Monitor was provided blank cassettes and microphones for updating the presentation as needed.

Three additional displays were fabricated at the Technical Monitor's request. These were 91 cm x 121 cm, lighted, and secure for displaying small items or pictures.

The exhibits were displayed at the following technical conferences and manned with SwRI personnel:

- (1) Presidents Committee on Employment of the Handicapped, Washington, D. C. (Display I) 30 Apr.- 2 May 1975
- (2) 2nd Congress of the International Rehabilitation Medicine Association, Mexico City (Display I) 27 Oct.- 1 Nov. 1974
- (3) Aerospace Medical Association, San Francisco, California, (Display II) 28 Apr. - 1 May 1975



FIGURE 1. NASA DISPLAY II

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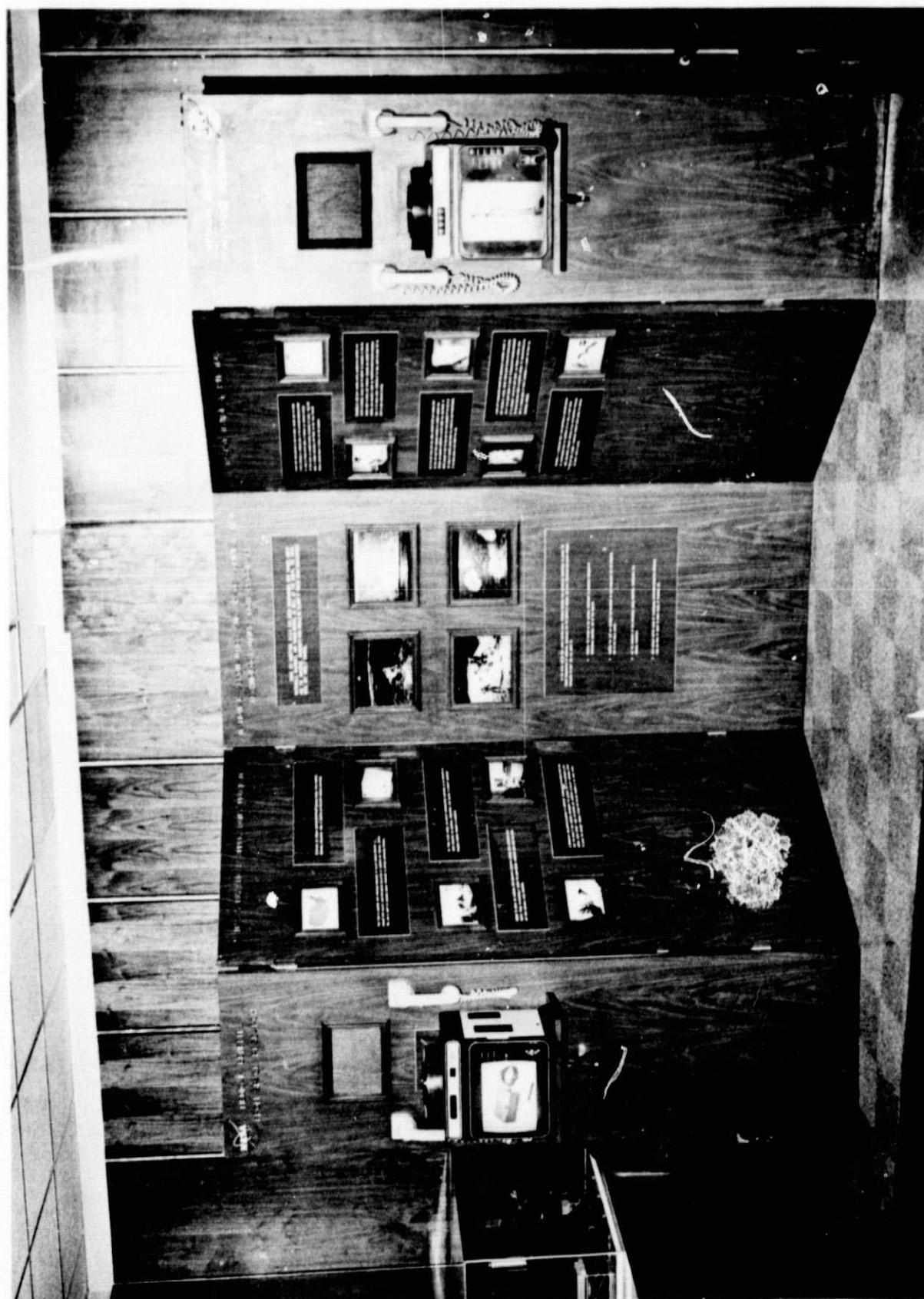


FIGURE 2. NASA DISPLAY II

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- (4) International Conference on Remote Emergency Medical Service, Lubbock, Texas, (Display II) 15-23 May 1975
- (5) National Meeting of the USPHS Officers, Las Vegas, Nevada (Display II) 3-5 June 1975.



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### TASK 2

Preparation of Brochure On  
NASA Contributions To Biomedicine

Prepared by:

Robert L. Wilbur  
Senior Biomedical Research Engineer  
Department of Bioengineering  
Southwest Research Institute

All NASA facilities were invited to submit information for inclusion in the brochure. Responses were received from almost all of the centers and final selections of the items included were made by the Technical Monitor.

Drafts of the text, photographs, format and cover were submitted to the Technical Monitor at several stages of development of the brochure. These were ammended by the TM who generated the final format. The table of contents of the final document is attached.

APPLICATIONS BROCHURE  
TABLE OF CONTENTS

ADVANCED BIOINSTRUMENTATION

GO ANALYZER  
MEMS  
MLM  
SLEEP MONITOR  
SLIDE STAINER/MICROSCOPE  
WHITE BLOOD CELL COUNTER  
APEAS

CARDIOLOGY

BETA RADIATION CATHETER  
CARDIOVASCULAR MEASURING DEVICES  
RECHARGEABLE CARDIAC PACEMAKER  
HEALTH CARE (REMOTE AND EMERGENCY)

TELECARE  
STARPAHC  
IMSS TRAINING DOCUMENT  
VIDEO REQUIREMENTS FOR REMOTE  
MEDICAL DIAGNOSIS

IMAGE PROCESSING

INFRARED SCANNING OF THERMAL BURNS

REHABILITATION

PATIENT ASSIST DEVICE  
VITAL SIGNS MONITOR  
MAMA  
PAPER MONEY IDENTIFIER  
TEMPER FOAM

OTHER

BIOSTEREOMETRICS  
BIOCARBON  
FIREFIGHTER'S BREATHING APPARATUS